

Notice of Allowability

Application No.

09/864,610

Examiner

Brian J. Sines

Applicant(s)

KARP ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the response filed 5/24/2004.
2. ☒ The allowed claim(s) is/are 1-52.
3. ☒ The drawings filed on 5/23/2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

DETAILED ACTION

Oath/Declaration

The declaration of Stephen D. O'Connor, which was received 5/24/2004, in support of the response to the official action mailed 3/24/2004 is acknowledged.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Vincent K. Gustafson on 7/21/2004.

The application has been amended as follows:

1. A system for transferring fluid between a vessel and a microfluidic device, the system comprising:

a vessel capable of holding a fluid, the vessel having at least one substantially nonplanar external wall defining a first aperture therein;

wherein the vessel includes a substantially cylindrical portion having a central axis, the at least one substantially nonplanar external wall bounds the substantially cylindrical portion, and the first aperture is disposed substantially perpendicular to the central axis; and

a microfluidic device having a first port;

wherein the microfluidic device is adaptably attached to the vessel by co-locating the first port with the first aperture such that fluid can flow between the vessel and the microfluidic device through the co-located first aperture and first port.

30. A method for transferring fluid between a vessel and a microfluidic device, the method comprising the steps of:

providing a vessel capable of holding fluid, the vessel having at least one substantially nonplanar external wall defining a first aperture therein;

wherein the vessel includes a substantially cylindrical portion having a central axis, the at least one substantially nonplanar external wall bounds the substantially cylindrical portion, and the first aperture is disposed substantially perpendicular to the central axis;

providing a microfluidic device having a first port and being adapted to contour to the vessel adjacent to the first aperture;

attaching the microfluidic device to the vessel such that the first port is co-located with the first aperture; and

causing fluid to flow between the vessel and the microfluidic device.

Claims 60 and 61 have been canceled.

Allowable Subject Matter

Claims 1 – 52 are allowed.

The following is an examiner's statement of reasons for allowance:

O'Connor et al. (U.S. Pat. No. 6,536,477 B1) teach microfluidic coupling devices capable of connecting microfluidic devices together to form an integrated system, which enables the effective transfer of fluids within the system.

The cited prior art neither teach or fairly suggest a system for transferring fluid between a vessel and a microfluidic device, the system comprising: a vessel capable of holding a fluid, the vessel having at least one substantially nonplanar external wall defining a first aperture therein; wherein the vessel includes a substantially cylindrical portion having a central axis, the at least one substantially nonplanar external wall bounds the substantially cylindrical portion, and the first aperture is disposed substantially perpendicular to the central axis; and a microfluidic device having a first port; wherein the microfluidic device is adaptably attached to the vessel by co-locating the first port with the first aperture such that fluid can flow between the vessel and the microfluidic device through the co-located first aperture and first port.

The cited prior art neither teach or fairly suggest a method for transferring fluid between a vessel and a microfluidic device, the method comprising the steps of: providing a vessel capable of holding fluid, the vessel having at least one substantially nonplanar external wall defining a first aperture therein; wherein the vessel includes a substantially cylindrical portion having a central axis, the at least one substantially nonplanar external wall bounds the substantially cylindrical portion, and the first aperture is disposed substantially perpendicular to the central axis; providing a microfluidic device having a first port and being adapted to contour

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to the vessel adjacent to the first aperture; attaching the microfluidic device to the vessel such that the first port is co-located with the first aperture; and causing fluid to flow between the vessel and the microfluidic device.

The cited prior art neither teach or fairly suggest a fluid sampling apparatus comprising: a cylindrical vessel, which is capable of holding a fluid, having a characteristic length and an interior wall that defines a first and a second radial aperture positioned from one another along the length of the vessel; a first moveable plunger sealingly engaged to the interior wall of the vessel; a second moveable plunger sealingly engaged to the interior wall of the vessel; and a reservoir having an inlet port in fluid communication with the first aperture and having an outlet port in fluid communication with the second aperture, wherein fluid is transferred from the vessel into the reservoir as the first and second plungers are translated outward from the vessel.

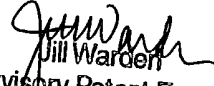
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines, Ph.D. whose telephone number is (571) 272-1263. The examiner can normally be reached on Monday - Friday (11:30 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jill Warden
Supervisory Patent Examiner
Technology Center 1700